

What is claimed is:

1. A vertical cavity surface emitting laser, comprising:
5 at least one quantum well having a depth of at least 40 meV and
 comprised of InGaAs;
 GaAsN barrier layers sandwiching said at least one quantum well; and
 GaAsN confinement layers sandwiching said barrier layers.
- 10 2. The vertical cavity surface emitting laser of claim 1 wherein said
 quantum well is up to and including 50 Å in thickness.
- 15 3. A vertical cavity surface emitting laser, comprising:
 at least one quantum well having a depth of at least 40 meV and
 comprised of InGaAs;
 GaAsN barrier layers sandwiching said at least one quantum well; and
 AlGaAs confinement layers sandwiching said barrier layers.
- 20 4. The vertical cavity surface emitting laser of claim 3 wherein said
 quantum well is up to and including 50 Å in thickness.
- 25 5. A vertical cavity surface emitting laser, comprising:
 at least one quantum well having a depth of at least 40 meV and
 comprised of InGaAs;
 AlGaAs barrier layers sandwiching said at least one quantum well;
 and
 GaAsN confinement layers sandwiching said barrier layers.
- 30 6. The vertical cavity surface emitting laser of claim 5 wherein said
 quantum well is up to and including 50 Å in thickness.